

### ABSTRACT OF THE DISCLOSURE

[0047]

The present invention provides an improved ion measuring composite electrode, measuring instrument incorporating the composite electrode, and a manufacturing method for forming a preform of a composite double glass pipe for forming the ion measuring composite electrode. A hollow inner pipe and a hollow outer pipe are axially aligned with an elongated member having liquid absorption capacity. The inner pipe is welded to the outer pipe to form an annular space there between for receiving reference electrode liquid. The elongated member insures electrical conductivity even in the presence of air bubbles so that the measuring instrument is operatable and an appropriate weld can be easily manufactured to improve productivity.